

NEW PATIENTS

The profile of patients commencing treatment in Australia during this decade (1990-98) has changed quite markedly in the demographics of age, race and primary renal disease (PRD).

During the last year (1997) these trends in race and PRD have continued but the trend in age distribution has been less clear. Although relatively a small proportion of the general population, Aboriginal people constitute an increasing and disproportionate element of the whole Australian dialysis group. Consequently their age, PRD and gender distribution have exerted a strong influence on the demographic pattern of the whole group.

The rise in young patients and in those with diabetic nephropathy, is due in part to the rise in the incidence of Aboriginal people commencing dialysis treatment.

Not only is the proportion of Aboriginals amongst new patients increasing, but, so is that of other non-Caucasoid groups from Asia and the Pacific Islands (10% 1997).

The high prevalence of diabetes and diabetic nephropathy in some of these racial groups provides an opportunity for treatment, which may reduce the burden of end stage renal failure (ESRF) support.

AGE

Amongst the Caucasoid proportion of the population there is no suggestion of an upsurge in the incidence of ESRF amongst the young and middle-aged. The steady rise in the number of elderly people has slowed in the age group 65-74 years, but continues in the older group, especially that 75-79 years old.

This age trend amongst new patients reflects that seen for some years in many countries in Western Europe and in North America but has yet to reach their level. Nevertheless there were more new patients (per million) aged 75-79 years than aged 60-64 years in age group population terms who commenced treatment during the past year.

These trends bear serious consequences for the decision regarding the demand for dialysis services, the method and distribution, as the proportion increases of patients requiring long term dialysis, requiring more staff attention, and requiring close access to acute cardiac support services.

Undetermined, but now to be reassessed, is the level of renal failure at which dialysis treatment is introduced. There has not been any request for a measure of renal failure for each patient since the serum creatinine question was ceased in 1991. With body weight, and age data, a fair estimate of glomerular function can be made, so it is intended to review current practice and to contribute some facts for discussion of the issue of "early" initiation of dialysis.

RACE

The demographic patterns of the individual States show an expected variation in the racial groups, with higher proportions of Aboriginal patients in Northern Territory, Queensland, Western Australia, and of other non-Caucasoids in New South Wales and Victoria. It is most important to stress that certain cross border migration of patients for treatment such as north Western Australia and Queensland to Darwin, north South Australia to Alice Springs, may distort the incidence figures for those States. No discussion of the extent of support for groups such as Aboriginal people should ignore this 'caveat' on the incident treatment in each State. To a lesser extent this cross border treatment occurs between Queensland/New South Wales, New South Wales/South Australia and Victoria, and Victoria/South Australia; so far no serious attempt has been made to quantitate these shifts, believing the influence on State totals would be small.

In regard to the median age of new patients in each State, those in Northern Territory and Western Australia were ten years younger than in Queensland, New South Wales and Victoria; fifteen years younger than in Tasmania and seven years younger than in South Australia.

GENDER

Most patients treated for ESRF in Australia and New Zealand have been male, but consistently males have been in a minority amongst the Aboriginal population. Does this reflect fewer males in the age group 20-54 years, or is there a real difference in the prevalence of severe renal disease between males and females? This male minority state has not been seen in the Maori or Pacific Island population nor in the Caucasoid population.

Males predominated in all States except Northern Territory, which reflected the high incidence of renal failure amongst Aboriginal females. The predominance of males seen in Caucasoid patients in Australia and New Zealand, was less prominent in Maoris, and not seen in Pacific Islanders. The majority of Aboriginal patients were female, both those with diabetic nephropathy and with glomerulonephritis which constitute most cases of ESRF. This observation needs further review. Is it due to early death of males? Is it different susceptibility to renal disease? Pacific Islanders have a similar preponderance of females amongst those with glomerulonephritis. Maoris are similar to Caucasoids in gender distribution in both diabetic nephropathy and glomerulonephritis.

Review of the age and gender distribution of Aboriginals, shows that females predominate in each age group except those 15-24 years; the peak female value is reached in those 45-54 years. The number of patients in the young adult group is too small for meaningful comment. The skewed gender distribution is seen in all of those States with a high Aboriginal population (Western Australia, Northern Territory and Queensland), and also in the remaining States. It is not just a northern regions observation. It has been seen each year for the past five years.

AUSTRALIAN STATES

A marked increase in new patients occurred in Northern Territory, Queensland and Western Australia, a moderate increase in Victoria, a fall in New South Wales and South Australia.

The South Australia and Tasmania results are quite different from those of other States which are all 20% higher at 79 per million.

The South Australian rate has been below the Australian average for the last five years. Review of the age group related results each year shows a lower intake in the age range ≥ 55 years. See Figure 41.

The lowest intake rates were South Australia (65 per million) and Tasmania (63 per million).

Excluding analgesic nephropathy the highest intakes were Northern Territory (299 per million) and Victoria (77 per million).

In the modal age group (65-74 years) the lowest rate was in South Australia (211 per million), the highest in Queensland (358 per million) and Northern Territory (1176 per million).

The median, mean ages and age range are shown in Figure 49.

The modal age group in all States was 65-74 years except Northern Territory with 35-44 years, and Western Australia was bi-modal 35-44 years and 65-74 years.

Figure 37

**New Acceptances by Race
Australia 1990 - 1997**

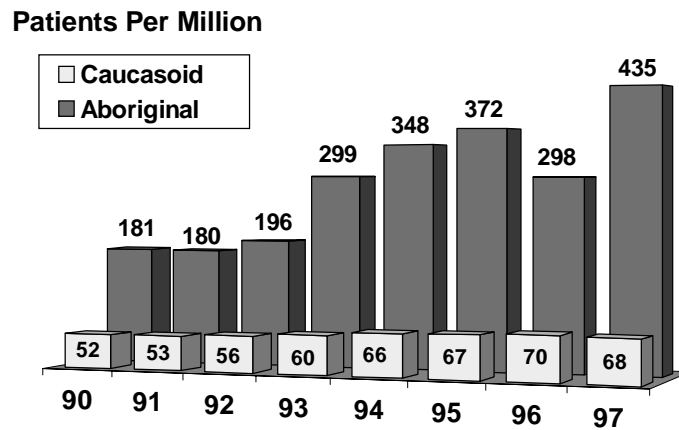


Figure 38

**New Acceptances by Race
New Zealand 1990 - 1997**

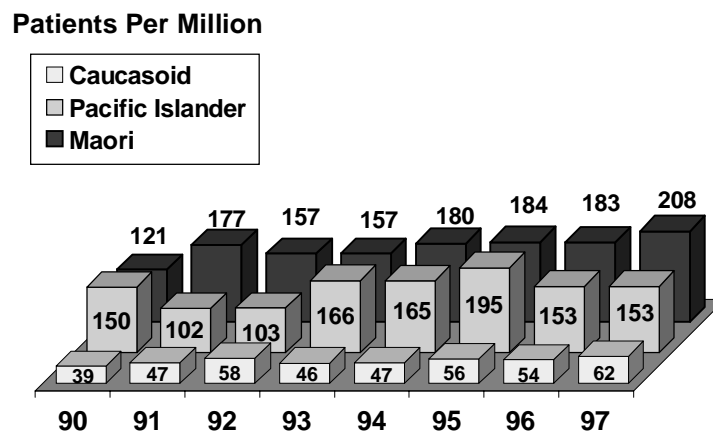


Figure 39

Australia and New Zealand

Number of New Patients by Race 1997

	Qld	NSW/ACT	Vic.	Tas.	SA	NT	WA	Aust.	N.Z.
Male									
Aboriginal	9	6	2	0	4	16	17	54	0
Caucasoid	119	252	195	18	59	5	49	697	97
Maori	0	3	1	0	0	0	1	5	62
Other	7	31	21	0	3	0	6	68	10
Pacific Is.	4	4	2	0	0	0	0	10	17
Total Male	139	296	221	18	66	21	73	834	186
Female									
Aboriginal	18	11	3	0	2	29	25	88	0
Caucasoid	94	184	115	12	25	4	36	470	66
Maori	0	0	0	0	0	0	0	0	47
Other	9	26	17	0	3	2	7	64	5
Pacific Is.	8	3	1	0	0	0	0	12	14
Total Female	129	224	136	12	30	35	68	634	132
Total	268	520	357	30	96	56	141	1468	318

Figure 40

Australia and New Zealand

Aboriginals as Proportion of Annual Intake of New Patients 1990 - 1997

State	1990	1991	1992	1993	1994	1995	1996	1997
Queensland	8%	10%	4%	13%	9%	11%	8%	10%
New South Wales/ACT	2%	1%	3%	2%	2%	3%	1%	3%
Victoria	0%	1%	0%	1%	0%	0%	1%	1%
Tasmania	0%	0%	0%	0%	0%	0%	0%	0%
South Australia	4%	5%	4%	4%	7%	9%	3%	6%
Northern Territory	84%	82%	91%	83%	95%	95%	85%	80%
Western Australia	14%	11%	12%	16%	21%	21%	15%	30%
Australia	5%	5%	5%	8%	8%	8%	7%	10%

Figure 41

Australia

Mean Number of New Patients by Age Group 1993 - 1997 Excluding Aboriginal and Analgesic Patients

Age Groups	Qld	NSW/ACT	Vic.	Tas.	SA	NT	WA	Aust.
45-54 years	31 (73)	68 (83)	52 (94)	5 (93)	16 (85)	<1 (39)	18 (84)	191 (86)
55-64 years	40 (148)	88 (159)	72 (188)	6 (138)	17 (130)	<1 (90)	19 (140)	242 (161)
65-74 years	50 (222)	112 (238)	146 (261)	8 (239)	21 (178)	1 (307)	25 (231)	304 (236)
Total	121 (136)	269 (149)	210 (166)	19 (145)	53 (124)	3 (84)	62 (135)	737 (147)

() Per million age group population

Figure 42

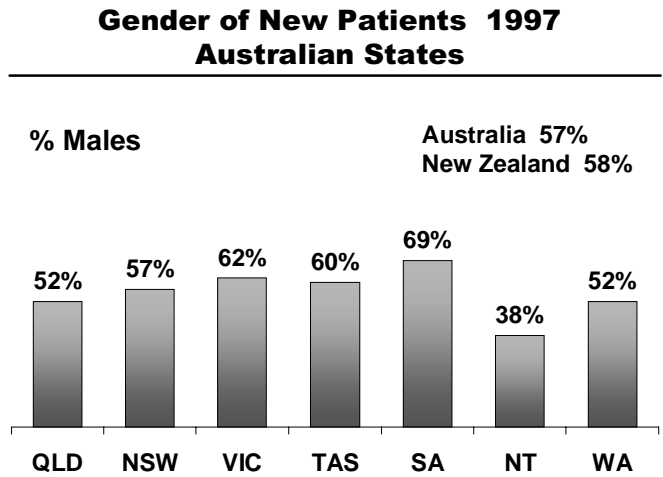


Figure 43

**Proportion of Male New Patients 1993 - 1997
Related to Racial Origin**

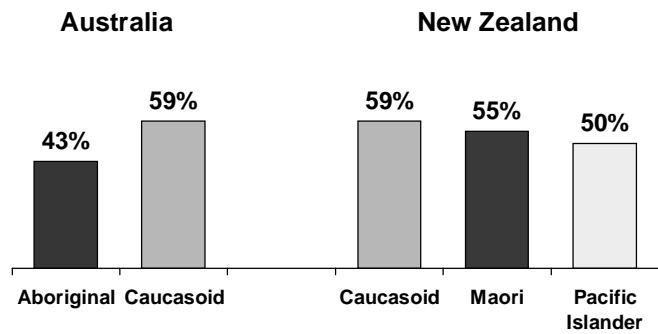


Figure 44

**Proportion of Male New Patients 1993 - 1997
Primary Renal Disease and Racial Origin**

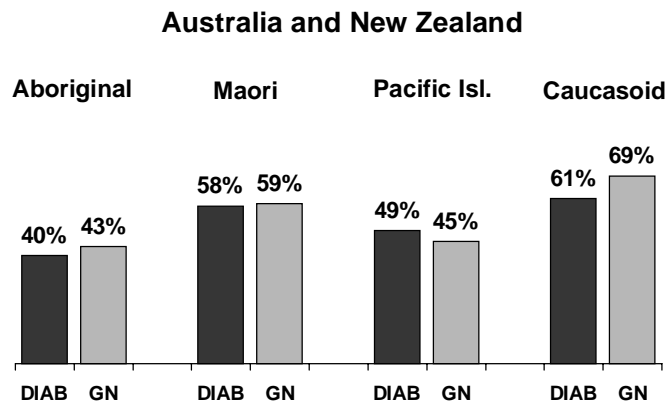


Figure 45

New Patients - Australia 1993 -1997
Mean Patients Per Million Age Group Per Year

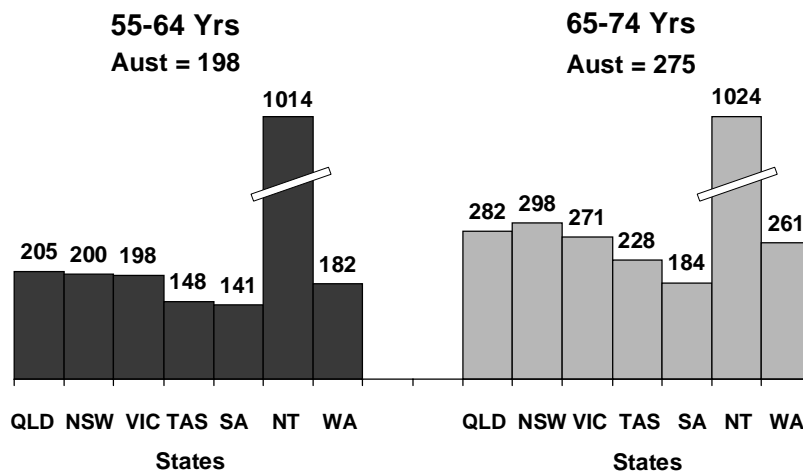
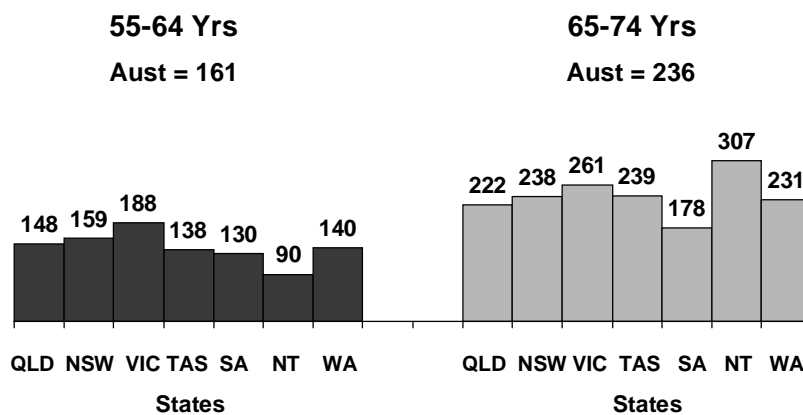


Figure 46

New Patients - Australia 1993 -1997
Mean Patients Per Million Age Group Per Year

Excluding Aborigines and Analgesic Nephropathy



NEW PATIENTS COMMENCING TREATMENT IN 1997

AUSTRALIA

See Figures 38,39, 47 -53.

The number of new patients has risen steadily over the past seven years from 981 patients (57 per million) to 1468 patients (79 per million). See Figure 47. Caucasoid patients have decreased to 79% (1997), from 83% (1996). In relation to the general population in each age group, those 65-74 years decreased in 1997 to 301 per million (317 per million 1996). See Figure 50.

There was only a 3% increase (37 patients) in the number commencing treatment compared to 1996. Incidence rates for the previous five years are shown in Figure 52.

Males comprised 57% of patients (57% in 1996). See Figure 51.

The median age of all patients was 58.4 years (58.2 years males, 58.7 years females). Modal age group was 65-74 years (males and females). Mean age was 55.2 years. Age range was from 9.6 months to 88.9 years. See Figures 49 and 53.

The age group specific new patient rates are shown in Figure 54.

Most patients were, Caucasoid 80%, 10% Aboriginal, 5% Asian, 4% Other, and 1% Pacific Islander. See Figures 37 and 39.

NEW ZEALAND

See Figures 47 -53.

In New Zealand, the number has risen from 287 patients (1996) to 318 patients (1997): 77 to 85 per million respectively. Non-Caucasoid patients represented 49% (1997), 51% (1996). Median age was 55 years. See Figure 47.

The intake rose 9.7% to 318 patients (85 per million) 1997: 287 patients (77 per million 1996). See Figure 55.

Males comprised 60% of patients (55% 1996). See Figure 51.

The median age of patients was 55.2 years for males and 54.4 years for females. Modal age group was 55-64 years for both males and females. Mean age had risen to 53 years, from 50.4 years (1996). Age range was from 7.2 months to 87.1 years. See Figures 49 and 56.

The age distribution showed a decrease (21%) in adults 45-54 years old, and an increase in young adults 25-34 years, 9% in 1997 (6% in 1996). Those 65-74 years increased to 22%. The age group specific rates are shown in Figure 57.

Half the patients were Caucasoid 51%, 34% Maori, 10% Pacific Islander, 3% Other, and 2% Asian. See Figures 38 and 39.

The comparative annual rates of treatment in relation to race show a 2-4 fold excess in the Aboriginal, Maori and Pacific Islanders compared to the Caucasoid group. See Australia Figure 37 and New Zealand Figure 38.

Figure 47

Australia and New Zealand

Annual Intake of New Patients 1993 - 1997

	1993	1994	1995	1996	1997
Australia	1160 (66)	1316 (74)	1387 (77)	1431 (78)	1468 (79)
Queensland	203 (65)	229 (72)	240 (73)	232 (69)	268 (79)
New South Wales/ACT	432 (68)	469 (74)	504 (79)	548 (84)	520 (79)
Victoria	273 (61)	321 (72)	328 (73)	342 (75)	357 (78)
Tasmania	29 (61)	25 (53)	41 (87)	30 (63)	30 (63)
South Australia	75 (51)	101 (69)	94 (64)	105 (71)	96 (65)
Northern Territory ★	35 [1] (208)	41 (240)	39 [1] (224)	48 (270)	56 (299)
Western Australia	113 (67)	130 (76)	141 (81)	126 (71)	141 (78)
New Zealand	232 (66)	248 (69)	287 (79)	287 (77)	318 (85)

[★] Two Northern Territory residents received initial treatment in South Australia, 1993 and 1995

() Per million population

Figure 48

Australia and New Zealand

Acceptance of Elderly New Patients 1993 - 1997

Age Groups	1993	1994	1995	1996	1997
Australia					
60-64 years	161 (226)	146 (207)	182 (260)	164 (234)	173 (239)
65-69 years	168 (245)	185 (268)	202 (292)	225 (325)	209 (304)
70-74 years	131 (236)	156 (270)	132 (223)	185 (307)	181 (297)
75-79 years	49 (124)	58 (147)	87 (214)	97 (227)	112 (251)
80-84 years	10 (40)	13 (49)	15 (55)	20 (70)	22 (76)
> 85 years	1 (6)	3 (16)	3 (16)	5 (25)	1 (5)
Total	520 (187)	561 (199)	621 (217)	696 (239)	698 (235)
New Zealand					
60-64 years	30 (212)	39 (280)	38 (274)	29 (210)	43 (312)
65-69 years	20 (149)	29 (199)	31 (259)	35 (260)	35 (260)
70-74 years	12 (105)	10 (87)	15 (131)	19 (163)	34 (292)
75-79 years	2 (24)	1 (12)	9 (108)	6 (71)	6 (71)
80-84 years	0 (0)	1 (19)	1 (18)	0 (0)	5 (87)
> 85 years	0 (0)	0 (0)	0 (0)	0 (0)	1 (36)
Total	64 (115)	80 (143)	94 (166)	89 (156)	124 (217)

() Per million population

Figure 49

Australia and New Zealand

Median, Mean and Age Range of New Patients 1997

	Qld	NSW/ACT	Vic.	Tas.	SA	NT	WA	Aust.	N.Z.
Male	(n=139)	(n=296)	(n=221)	(n=18)	(n=66)	(n=21)	(n=73)	(n=834)	(n=186)
Median	58.2	59.8	59.9	64.6	54.6	45.0	48.8	58.2	55.2
Mean	55.1	56.5	56.2	50.4	55.5	48.7	51.0	55.5	53.1
Range	9.0-81.3	3.4-83.9	3.3-88.9	10.8-80.2	24.2-81.9	18.8-75.7	0.8-85.00	0.8-88.9	0.6-87.1
Female	(n=129)	(n=224)	(n=136)	(n=12)	(n=30)	(n=35)	(n=68)	(n=634)	(n=132)
Median	60.1	61.1	58.2	60.0	60.4	48.4	54.1	58.7	54.4
Mean	55.0	56.8	53.1	56.1	54.9	48.2	54.0	54.8	52.8
Range	6.6-83.3	5.4-83.2	1.7-79.8	25.9-75.9	19.9-80.6	14.6-69.7	23.5-79.8	1.7-83.3	5.1-77.0
All	(n=268)	(n=520)	(n=357)	(n=30)	(n=96)	(n=56)	(n=141)	(n=1468)	(n=318)
Median	59.3	60.6	59.4	63.8	56.8	47.9	50.2	58.4	55.0
Mean	55.1	56.6	55.0	58.7	55.2	48.4	52.4	55.2	53.0
Range	6.6-83.3	3.4-83.9	1.7-88.9	10.8-80.2	19.9-81.9	14.6-75.7	0.8-85.0	0.8-88.9	0.6-87.1

n = Number of Patients

Figure 50

Australia and New Zealand

**Number of New Patients by Age Group
1-Jan-97 to 31-Dec-97**

Age Groups	Qld	NSW/ACT	Vic.	Tas.	SA	NT	WA	Aust.	N.Z.
00-04 years	0 (0)	2 (4)	3 (10)	0 (0)	0 (0)	0 (0)	2 (16)	7 (5)	1 (4)
05-14 years	6 (12)	6 (7)	5 (8)	1 (14)	0 (0)	1 (31)	1 (4)	20 (8)	6 (11)
15-24 years	5 (10)	27 (29)	15 (23)	0 (0)	4 (20)	1 (32)	4 (15)	56 (21)	13 (24)
25-34 years	35 (67)	32 (31)	34 (47)	3 (45)	8 (36)	3 (81)	12 (42)	127 (44)	30 (51)
35-44 years	31 (60)	57 (56)	34 (48)	2 (27)	15 (66)	19 (620)	32 (112)	190 (66)	41 (72)
45-54 years	37 (84)	77 (91)	58 (99)	5 (82)	19 (98)	16 (732)	26 (112)	238 (100)	68 (152)
55-64 years	52 (185)	116 (205)	85 (213)	5 (119)	17 (129)	10 (1030)	20 (138)	305 (194)	78 (255)
65-74 years	79 (358)	144 (303)	99 (297)	8 (229)	25 (211)	5 (1176)	30 (273)	390 (301)	69 (275)
75-84 years	23 (184)	59 (220)	23 (122)	6 (292)	8 (114)	1 (678)	14 (235)	134 (183)	11 (77)
85-94 years	0 (0)	0 (0)	1 (17)	0 (0)	0 (0)	0 (0)	0 (0)	1 (5)	1 (25)
Total	268 (79)	520 (79)	357 (78)	30 (63)	96 (65)	56 (299)	141 (78)	1468 (79)	318 (85)

() Per million age group population

Figure 51

Australia and New Zealand

**Age and Gender of New Patients
1-Jan-97 to 31-Dec-97**

Age Groups	Qld (n=268)		NSW/ACT (n=520)		Vic. (n=357)		Tas. (n=30)		SA (n=96)		NT (n=56)		WA (n=141)		Aust. (n=1468)		N.Z. (n=318)	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
00-04 yrs	0	0	2	0	2	1	0	0	0	0	0	0	2	0	6	1	1	0
05-14 yrs	1	5	2	4	3	2	1	0	0	0	0	1	1	0	8	12	3	3
15-24 yrs	4	1	16	11	5	10	0	0	1	3	1	0	1	3	28	28	6	7
25-34 yrs	22	13	19	13	19	15	1	2	7	1	1	2	8	4	77	50	20	10
35-44 yrs	10	21	33	24	19	15	1	1	11	4	9	10	20	12	103	87	25	16
45-54 yrs	24	13	46	31	41	17	3	2	15	4	4	12	11	15	144	94	37	31
55-64 yrs	24	28	64	52	53	32	3	2	10	7	2	8	8	12	164	141	44	34
65-74 yrs	40	39	80	64	63	36	4	4	16	9	3	2	12	18	218	172	41	28
75-84 yrs	14	9	34	25	15	8	5	1	6	2	1	0	10	4	85	49	8	3
85-94 yrs	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0
Total	139	129	296	224	221	136	18	12	66	30	21	35	73	68	834	634	186	132

New Patients - Australia

Figure 52

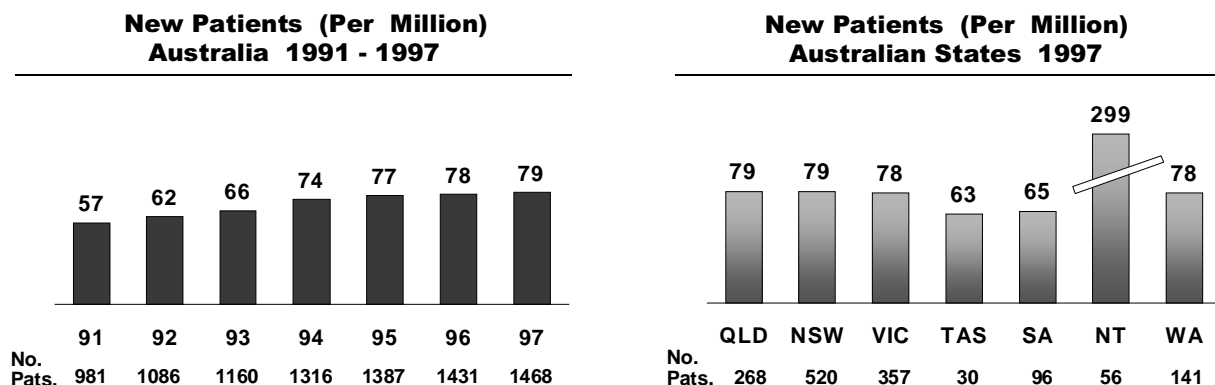


Figure 53

Age of New Patients - Australia 1997

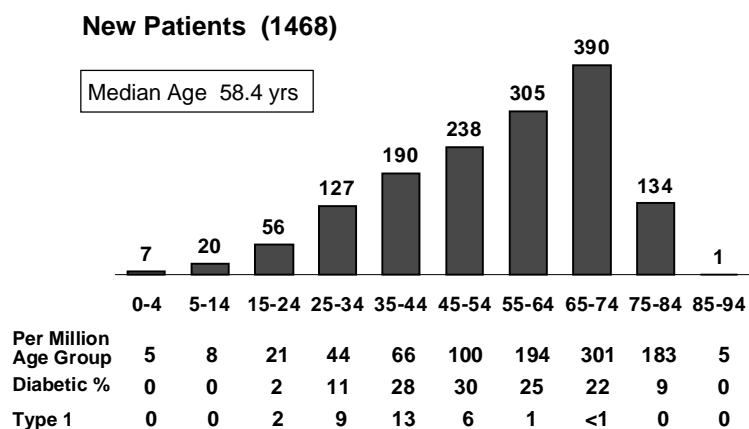
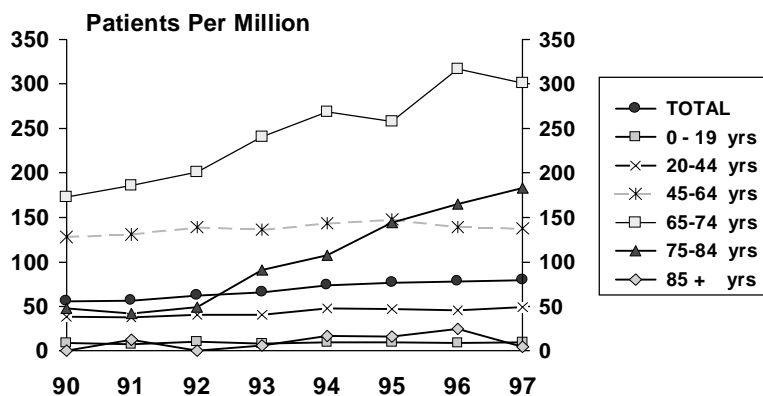


Figure 54

Acceptance of New Patients 1990 - 1997 Age Specific Rates - Australia



New Patients - New Zealand

Figure 55

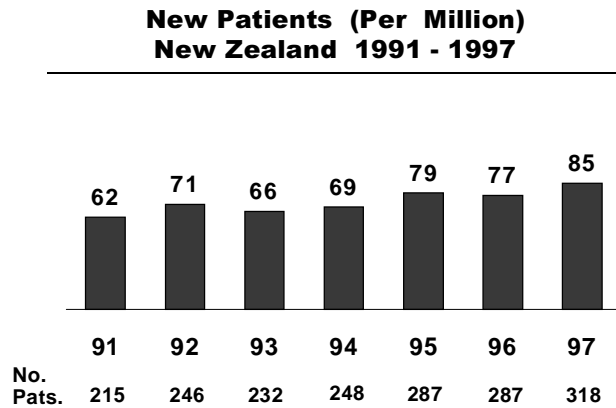


Figure 56

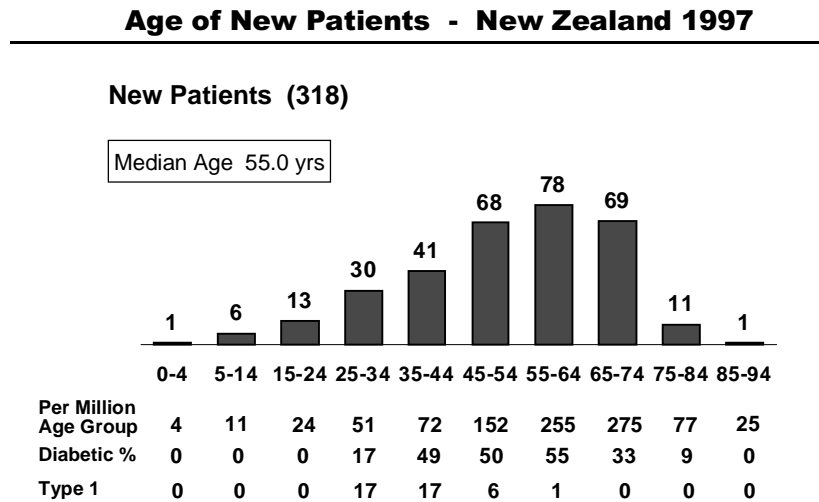


Figure 57

